

MEMORANDUM

DATE: August 2, 2021

TO: City of Lincoln Parks and Recreation Department, Lower Platte South Natural Resources District Board of Directors, Nebraska Game and Parks Commission, and Nebraska Chapter Pheasants Forever, Inc.

FROM: Tom Malmstrom
Natural Resources Coordinator/Park Planner II - Parks and Recreation Department
Saline Wetlands Conservation Partnership

RE: Saline Wetlands Conservation Partnership – 2019-2020 Progress Report

On behalf of the Saline Wetlands Conservation Partnership (SWCP) I want to make you aware of the activities, which occurred in 2019 and 2020. The SWCP was initiated in 2003 and continues efforts to conserve Nebraska's eastern saline wetlands. In 2016, the City of Lincoln received a \$795,000 grant from the Nebraska Environmental Trust over a three-year period from 2016 to 2019. This grant was extended to December 31, 2020. The SWCP also utilizes other grant sources for land acquisition, wetland restoration, education, and land management.

In 2019, The City of Lincoln, Lower Platte South Natural Resources District (LPSNRD), Nebraska Game and Parks Commission (NGPC), and Pheasants Forever, Inc. entered into agreements to continue the Saline Wetlands Conservation Partnership. The agreements are for five years and will need to be renewed by June 30, 2024.

Efforts of the SWCP are to protect, restore, and manage the rare and unique saline wetland habitat. *Nebraska's Eastern Saline Wetlands Conservation Plan, 2018* updated the initial Implementation Plan completed in 2003. This update is located on the City web site here:

<https://www.lincoln.ne.gov/files/sharedassets/public/parks-amp-rec/saline-wetlands/implementationplan.pdf>

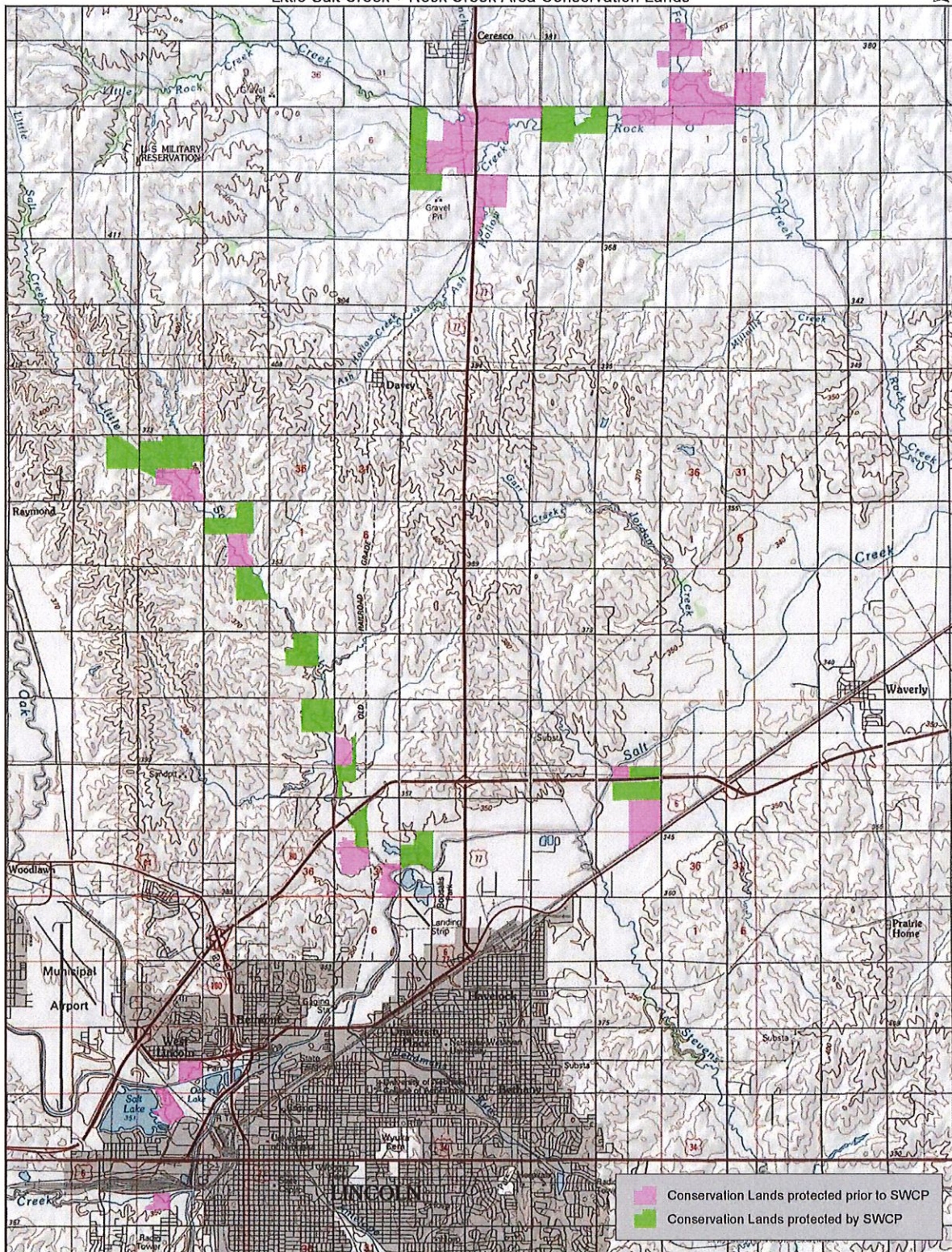
Nebraska's Eastern Saline Wetlands Conservation Plan, 2018 provides conservation guidance for continued efforts to conserve the saline wetlands.

Since its inception, approximately 1,676 acres of habitat containing saline wetlands, freshwater wetlands, native prairie, and other associated upland habitat have been conserved through fee-title acquisition from willing sellers. Activities continue with education, saline wetland restoration and conservation projects, and the operation and maintenance of conservation areas.

Illustration 1 identifies saline wetland properties, which have been acquired through fee-title acquisitions from willing sellers since the 1980's.

Illustration 1

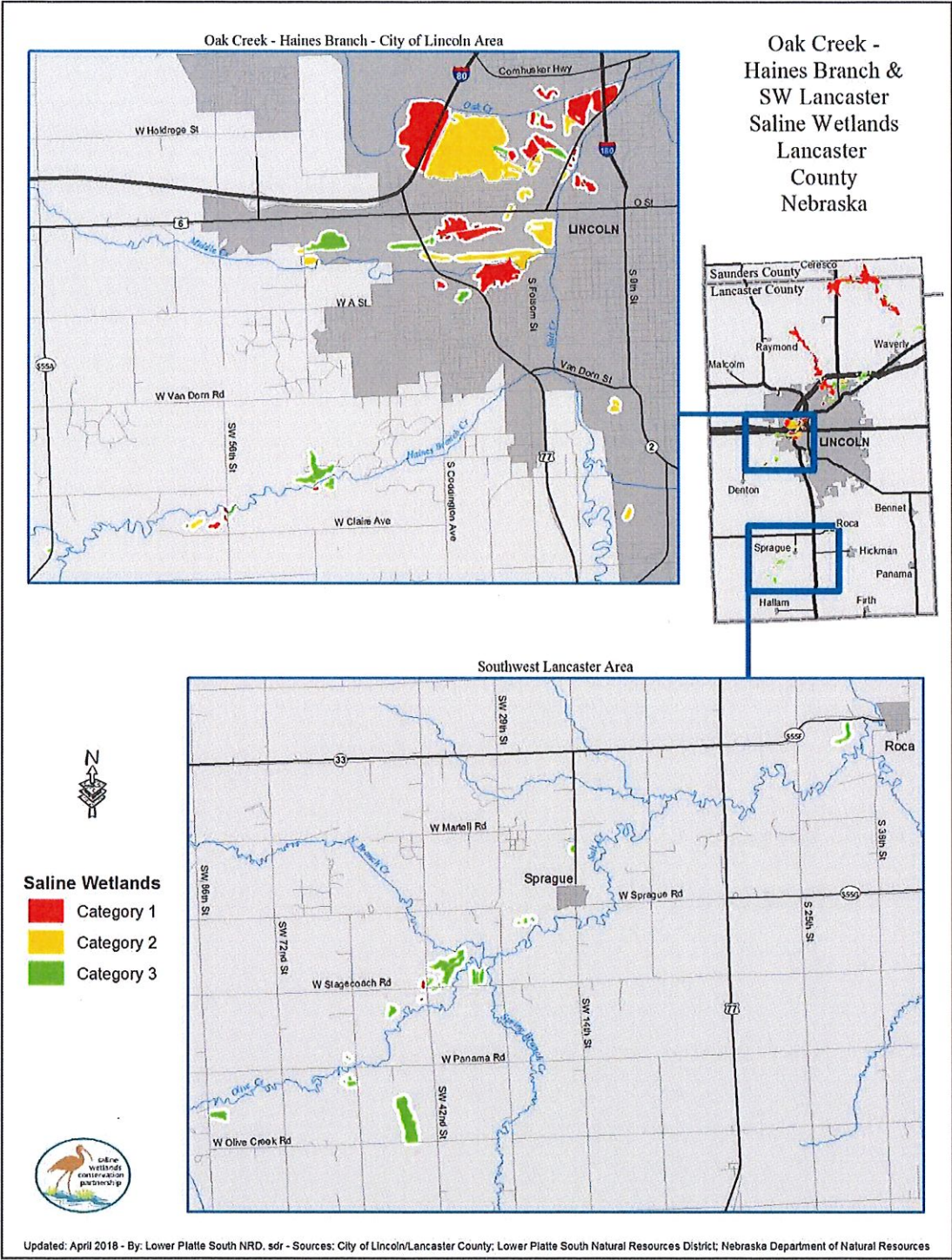
Little Salt Creek + Rock Creek Area Conservation Lands



Map By: Lower Platte South NRD, sdr - Updated: May 2021

Illustration 2 identifies saline wetland locations located in southwestern Lancaster County. Saline wetland locations in the Oak Creek- Haines Branch inset include Pioneers Park and the Capital Beach/Airport areas. A few saline wetland conservation easements held by the USDA are in the Southwest Lancaster inset near Roca along West Olive Creek Road and Southwest 42nd Street.

Illustration 2



SUMMARY OF 2019 - 2020 ACTIVITIES

FEE TITLE ACQUISITION

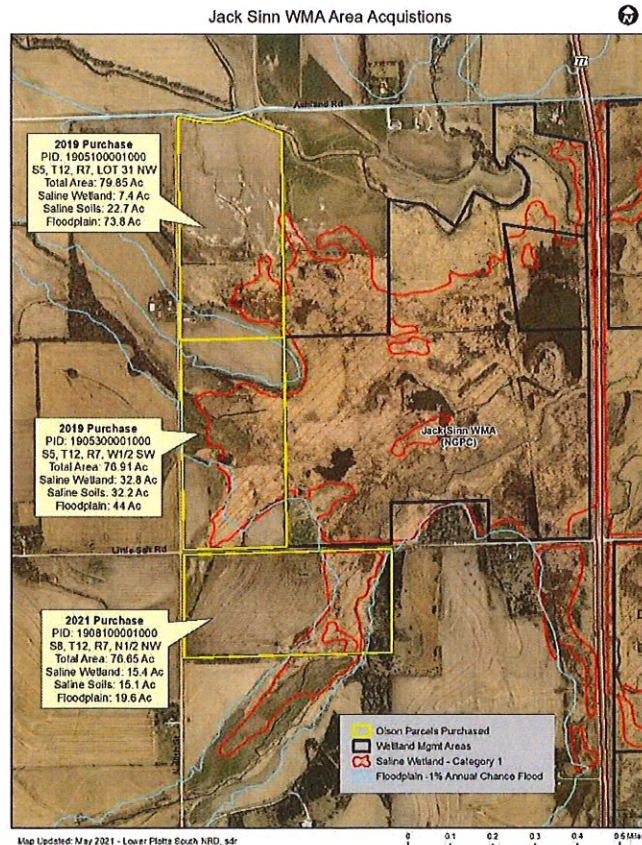
Jack Sinn Wildlife Management Area (Olson addition) – June 2019

Between North 70th and North 84th streets and south of Ashland Road

Size: 156.8 acres
Purchase price and date: \$713,500 on July 29, 2019
Funding sources: Nebraska Game and Parks Commission –Habitat and other cash funds (\$227,500)
Section 6 through the U.S. Fish and Wildlife Service (\$406,000)
2016 City of Lincoln NET Grant (\$60,000)
Saline Wetlands Conservation Partnership (\$20,000)
Owner: Pheasants Forever, Inc. (NGPC provides land management)

Notes – The property contains 40.2 acres of Category 1 saline wetlands and 54.9 acres of saline hydric soils. (Gilbert and Stutheit 1994). Approximately 118 acres are within the floodplain. The property is contiguous with 1,620 acres of the Jack Sinn Wildlife Management Area that is owned and managed by the Nebraska Game and Parks Commission. Approximately three acres saline meadow/flat area within the property has been designated by the U.S. Fish and Wildlife Service as critical habitat for the Salt Creek tiger beetle.

These are two of three parcels the Olson family has sold to Pheasants Forever, Inc. The third piece, south of this parcel was purchased in 2021.



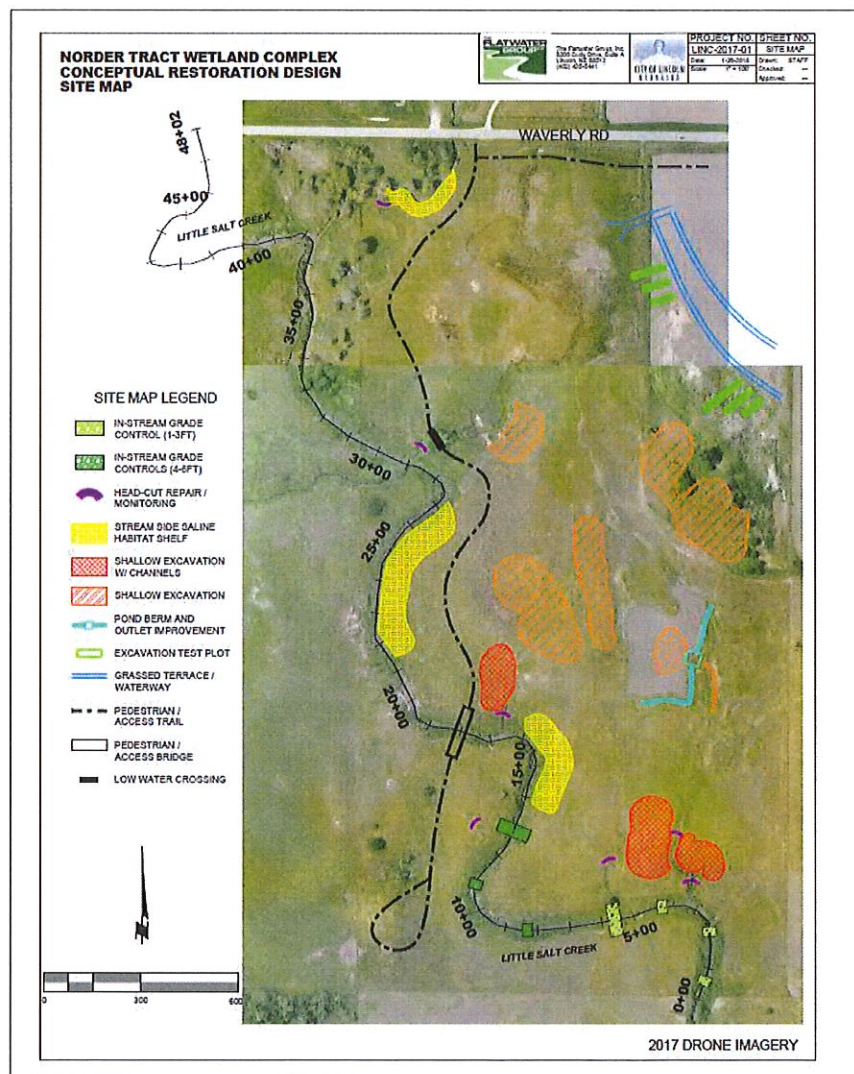
SALINE WETLAND RESTORATION

GLACIAL HILL (NORDER PROPERTY) RESTORATION AND PLANNING DESIGN

The 79-acre Norder tract was acquired by the City of Lincoln in September 2014 and is owned and managed by the City of Lincoln. It contains about 60 acres of Salmo soils, 30 acres of Category 1 saline wetland, and 0.6 miles of Little Salt Creek.

The 2017 restoration and planning design project included data collection, field investigations, design sessions, and compilation of design memorandum. The design memorandum outlined all data collection and field investigation efforts and summarized recommended design interventions. The 2018 cost summary to complete construction of the restoration design was estimated at \$995,000.

The Christensen tract, which is adjacent to the west of Norder tract was acquired after the completion of the restoration and planning design project in 2017.



FRANK SHOEMAKER MARSH ENGINEERING

This engineering design project at Frank Shoemaker Marsh (FSM) was completed in 2019-2020 on behalf of the Saline Wetlands Conservation Partnership. FSM is a 156-acre saline wetland management area owned by the City of Lincoln. Specifically, the design services were for bank improvements along Little Salt Creek to enhance endangered species habitat.

The habitat enhancement site is on the west side of Little Salt Creek. As designed, earth material would be excavated, loaded into off-road dump trucks, and hauled across Little Salt Creek. A temporary crossing is included in the design that will provide the most direct path to the spoil location east of the project site and minimize impacts to the remainder of the saline wetland management area. A Section 404 permit application was submitted to USACE Omaha Regulatory office in April 2020 and approved in December 2020.

FINAL ENGINEERING - UPPER LITTLE SALT CREEK SALINE WETLANDS PROJECT

In 2018, The Flatwater Group, Inc. was hired to perform the engineering design for the Upper Little Salt Creek Saline Wetland Restoration Project for properties managed by the Saline Wetlands Conservation Partnership. The project, completed in December 2020, developed a final design for the Upper Little Salt Creek saline wetlands. Properties included were Helmuth Marsh (Pheasants forever, Inc.), Little Salt Creek WMA (NGPC), Little Salt Fork Marsh Preserve (LPSNRD), Little Salt Creek West WMA (NGPC), and Little Salt Springs (LPSNRD).

Site plans for the wetland enhancements are included in Appendix.

LITTLE SALT CREEK WATERSHED SALINE WETLAND ENHANCEMENT AND PROTECTION PROJECT

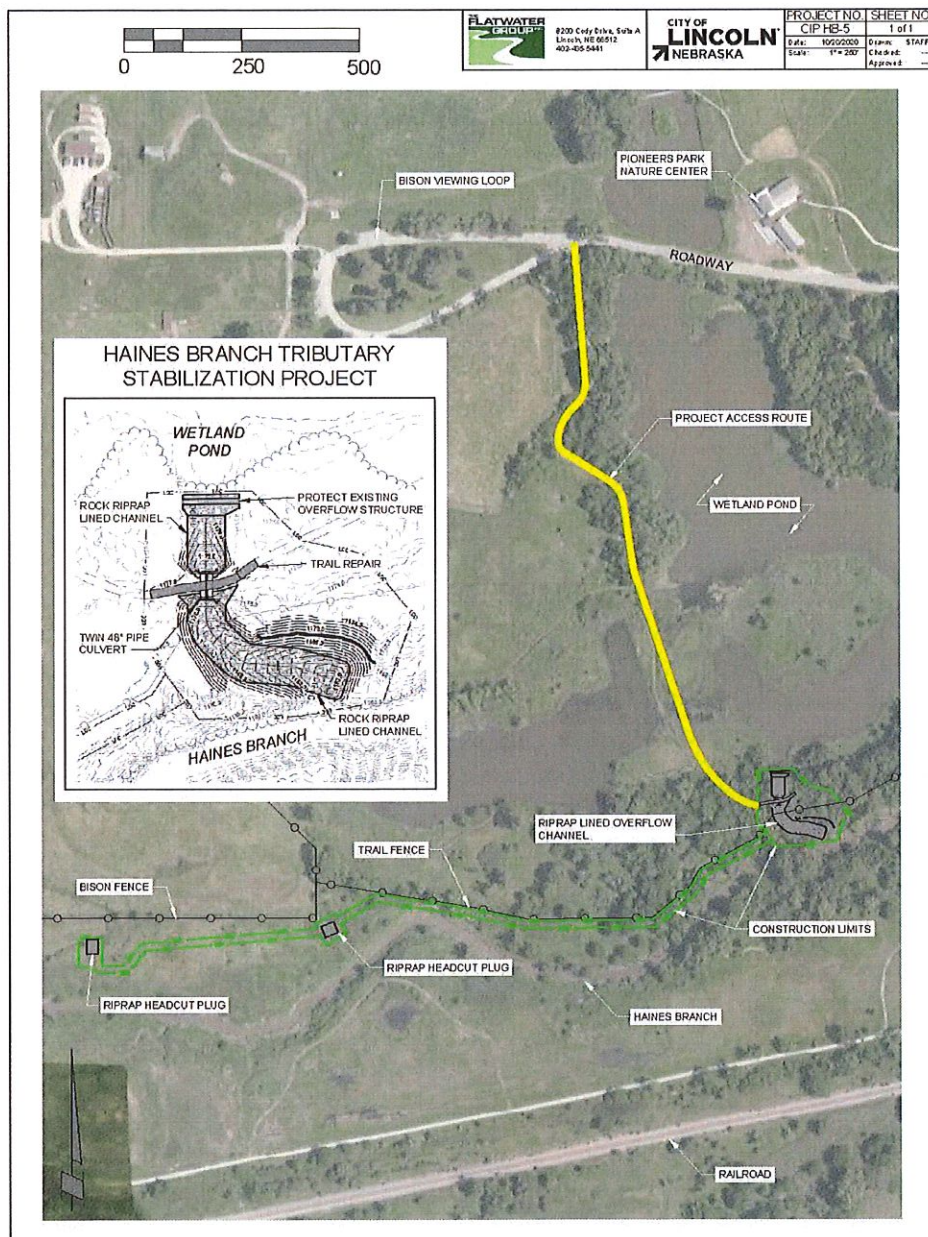
In July 2019, the Lower Platte South Natural Resources District submitted a Watershed and Flood Prevention Operation grant application to the Natural Resources Conservation Service (NRCS) to support saline wetland habitat enhancement and protection, wetland rehabilitation and erosion and sediment control projects in the Little Salt Creek watershed.

The PL566 project was awarded in 2020 and in late 2020 an agreement was completed with NRCS and a consultant was selected to perform the planning component of the project.

HAINES BRANCH ENGINEERING

The City of Lincoln, on behalf of the Saline Wetlands Conservation Partnership completed an Engineering Design Plan along the Haines Branch located in the southwestern portion of Pioneers Park in 2020. The project will improve hydrology for both freshwater and saline wetlands and contains critical habitat along Haines Branch for the Salt Creek tiger beetle, a Federal and State listed endangered species.

The “Haines Branch Tributary Stabilization Project” was identified in the Haines Branch Watershed Master Plan (Capital Improvement Project HB-5). Engineering was funded by the City of Lincoln’s 2016 NET grant for eastern saline wetlands. The total cost for construction is estimated at \$260,379 (includes 10 percent contingency).



LAND MANAGEMENT

LAND SURVEY - GLACIAL HILL (NORDER PROPERTY)

A land survey was completed in 2019 to delineate the boundaries from adjacent properties in private ownership and for future preparation of fencing projects.

FENCING – LITTLE SALT CREEK WEST WMA and JACK SINN WMA

In 2020, boundary fencing was constructed and replaced at two Nebraska Game and Parks Commission sites. The fencing was needed to facilitate prescribed grazing opportunities, which is an important land management tool on conservation areas. On behalf of the SWCP the City of Lincoln agreed to cost share 50 percent of the fencing cost.

Little Salt Creek West WMA (approximately 5,000 linear feet)

Jack Sinn WMA (10,260 linear feet)

DRIVEWAY CONSTRUCTION AT GLACIAL HILL (CHRISTENSEN PARCEL) FENCING – GLACIAL HILL

Driveway Construction – A driveway was constructed off Waverly Road on west property line to provide management access to area west of Little Salt Creek in 2019. Gate and fence installation were provided by LPSNRD staff

Fencing – Materials were provided for the cooperator to repair/replace boundary fence in exchange for prescribed grazing.

NATIVE SEEDING – JACK SINN WMA (OLSON PROPERTY)

In the spring of 2020, a high diversity of seeding of approximately 71 acres was completed. Cropland acres will be returned to a high-quality grassland habitat buffering the Category 1 saline wetlands on site. The purpose of the seeding was to restore and manage grassland habitat for the benefit of resident game species, migratory birds, other wildlife species, and to provide enhanced recreational opportunities. The project was made possible through a WILD Nebraska, Wildlife Extension Agreement between the Nebraska Game and Parks Commission and Pheasants Forever, Inc.

EQUIPMENT - UTV, CHAINSAWS (2), BACKPACK SPRAYERS (2), AND GPS RECEIVER BUNDLE

Some of the equipment necessary to complete this work was provided by the SWCP and through funding from the City of Lincoln's 2016 NET grant. Equipment purchased in 2020 included: two chainsaws, two backpack sprayers, UTV (Polaris Ranger 1000), and GPS receiver bundle.

SALINE WETLAND RESEARCH

The SWCP has worked with partners on a variety of projects within the saline wetlands. Funding for projects has come from the Nebraska Environmental Trust, U.S. Fish and Wildlife Service (USFWS), U.S. Environmental Protection Agency, and the Nebraska Game and Parks Commission.

ENDANGERED SPECIES

Efforts of the SWCP are to protect, restore, and manage the rare and unique saline wetland habitat and not just endangered species. The Salt Creek tiger beetle and Saltwort plant are indicator or bio species where their presence in Nebraska's eastern saline wetlands can indicate certain environmental conditions, such as soil type, pollution levels, etc. Therefore, the SWCP partners on the conservation of these species when appropriate.

The Salt Creek tiger beetle (*Cicindela nevadica lincolniana* Casey) was listed a state endangered species by NGPC in 2000 and Federal endangered species by USFWS in 2005. It is endemic to the saline wetlands in Lancaster and southern Saunders counties. Saltwort (*Salicornia rubra*) is a state listed endangered species. In Nebraska, the Saltwort is only found in the saline wetlands.

The final revision to designate 1,110 acres of critical habitat for the Salt Creek tiger beetle (SCTB) was approved USFWS in 2014. Critical habitat is identified along four streams that contain sufficient potential habitat to support viable populations of Salt Creek tiger beetle: Little Salt Creek, Rock Creek, Oak Creek, and Haines Branch Creek.

Salt Creek Tiger Beetle Research

The following research information was provided by:

Shaun Dunn
Natural Heritage Zoologist
Nebraska Game and Parks Commission



2019 SCTB Highlights

- A productive year for the recovery program of the Salt Creek tiger beetle
- Meeting with partners in May to discuss plans for the year
- Completed Section 6 grant (final report in development)
 - Started a new Section 6 grant in March
 - New Section 6 grant proposal was submitted to the USFWS in May
- Topeka Zoo and Conservation Center was brought on to raise beetles in captivity
- June 12, 2019 held meeting to inform public and stakeholders about releasing SCTBs on NGPC properties
- Presented update on effort to release SCTB on NGPC properties to NGPC Board of Commissioners at June meeting and answered Commissioners' questions
- Released over 200 adult beetles and 52 larvae in 2019
- First release on NGPC property!
- Continuing to work with many partners to keep this program moving forward:
 - Henry Doorly Zoo
 - Lincoln Children's Zoo
 - Topeka Zoo
 - University of Nebraska – Lincoln
 - City of Lincoln
 - Lower Platte South Natural Resource District
 - U.S. Fish and Wildlife Service
 - Saline Wetlands Conservation Partnership
 - Landowners

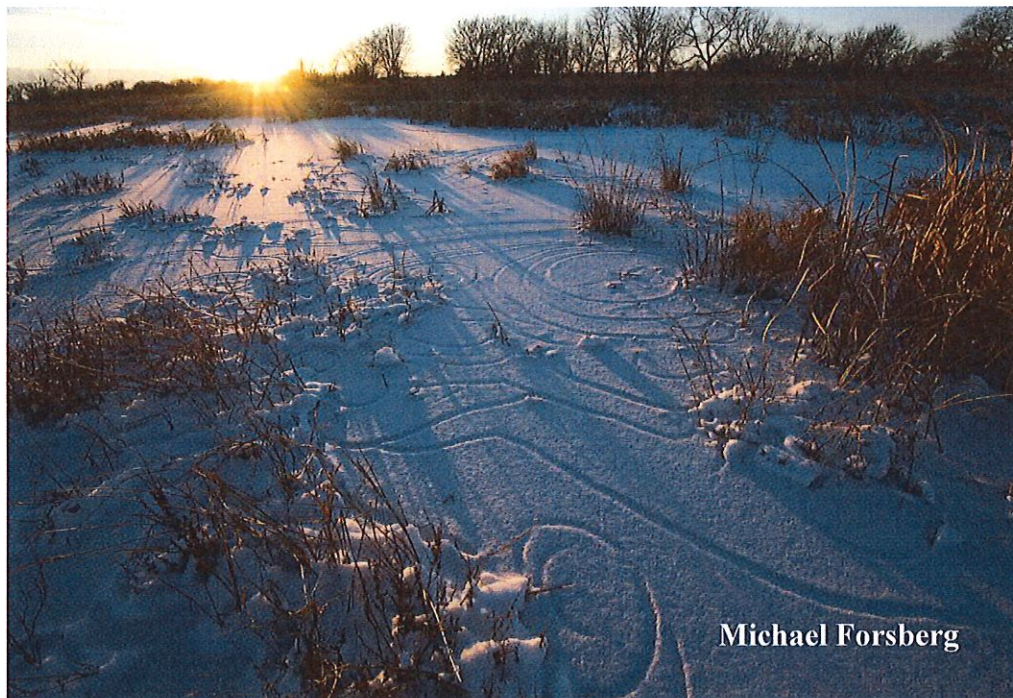


2020 SCTB Releases

- May 6, 2020 – 62 Larvae at Little Salt Creek WMA
- May 11, 2020 – 151 Larvae at Marsh Wren
- May 14, 2020 – 45 Larvae at Little Salt Creek WMA
- May 18, 2020 – 48 Larvae at Arbor Lake
- June 25, 2020 – 25 Adults at Marsh Wren
- June 28, 2020 – 2 Adults at Frank Shoemaker Marsh
- July 7, 2020 – 16 Adults Little salt Creek WMA
- July 13, 2020 – 3 Adults at Little Salt Creek area near Arbor Road
- July 21, 2020 – 1 Adult at Little Salt Creek area near Arbor Road
- August 3, 2020 – 1 Adult at Little Salt Creek area near Arbor Road

SCTB wild population count results

- **2019** - 249 adults (approximately 1/3 less from previous years). Decrease likely due to 2019 flooding
- **2020** – 345 adults



SALINE WETLAND OUTREACH AND EDUCATION

Saline Wetlands Digital Imaging Collection

This collection documents the history of the saline wetlands in Eastern Nebraska, including channel improvements of Salt Creek and Dead Man's Run, flooding and high water on Salt Creek in the 1950s and 1960s, the early days of the Salt Valley Watershed District and the Salt-Wahoo Watershed Association, current efforts to conserve and restore saline wetland areas, and historical collections from NEBRASKAland magazine and Nebraska Game and Parks Commission. Dates covered are 1940-2018, with most materials from the 1980s-2000s.



Collection materials include photographs, maps, and manuscripts. Areas representing saline wetlands include Salt Creek, Little Salt Creek, Oak Creek, Oak Lake, Capitol Beach, and Rock Creek.

Photographic materials include images in color and black & white.

The materials are accessible in two

different locations: Nebraska Game and Parks Photo Library and the University of Nebraska-Lincoln's Digital Media Commons. University of Nebraska-Lincoln's Digital Media Commons and the Nebraska Game and Parks Photo Library (historical collections from NEBRASKAland magazine and Nebraska Game and Parks Commission).

Funding for the project was primarily for a Pheasants Forever, Inc. employee hired in 2018 specifically to research and document images of Nebraska's eastern saline wetlands. Other cost was for equipment and materials necessary to digitize documents. Office space was provided by the NGPC and LPSNRD. The saline digital wetlands imaging project ended on December 31, 2019.

Public Outreach

- The Lower Platte South NRD provides opportunities for local schools to visit the saline wetlands to learn about saline wetland soils, vegetation, and hydrology. Students examine invertebrate health within wetlands and streams to indicate health. In the spring and fall of 2019 the LPSNRD hosted field trips with 5th grade students at the Lincoln Saline Wetlands Nature Center. Over 200 students enjoyed netting insects at the site, learning about the vegetation and potential wildlife and netting for macroinvertebrates in the water! In the summer of 2019, staff utilized Lincoln Saline Wetlands Nature Center for field trips with Day Camps from the LPSNRD and over 50 students got to explore!
- Nebraska Game and Parks Commission – Several webinar programs have focused on wetlands and have featured information regarding Nebraska's eastern saline wetlands. The Nebraska Natural Legacy conference has included sessions on the saline wetlands.
- The Coordinator continues to present "saline wetland jeopardy" to fifth grade students attending the Earth wellness festival. Due to Pandemic, the 2020 Festival was not held.

- In August 2019, the Upper Mississippi/Great Lakes Joint Venture held their annual meeting in Nebraska. The Partnership assisted with a tour of two saline wetland management areas; Marsh Wren (to talk about the restoration project) and Arbor Lake to observe a saline marsh/wetland. A narrated drive by tour of additional saline wetland areas was also presented to the group.



- Saline Wetlands web site - The Saline Wetlands Conservation Partnership web site was developed in 2005 and is updated on an annual basis. It is accessed through the City of Lincoln/Parks and Recreation Department web page. This website provides information related to the Partnership, a description of saline wetlands and where they are located, provides information and photographs of publicly owned saline wetland areas, which are accessible for the public, and descriptions and photos of the unique flora and fauna of saline wetlands. Links are also provided to a variety of publications documenting the conservation of the saline wetlands.

SUMMARY OF SALINE WETLANDS AND SOILS PROTECTED (2001-present)

In order to preserve and restore these wetlands, an Implementation Plan for the Conservation of Nebraska's Eastern Saline Wetlands was initially completed in 2003. The Implementation Plan was updated with the 2018 Nebraska's Eastern Saline Wetlands Conservation Plan. The update continues to address the preservation and restoration of Nebraska's eastern saline wetlands. The Plan Goal, Comprehensive strategies, and Landscape objectives are established for future conservation of the wetlands. A summary of wetland acres conserved through fee-title acquisition and conservation easements since 2001 through the efforts of the Partnership is provided below. This summary is based on targets identified within Landscape objectives 1–4.

Summary of wetland acres conserved through fee-title acquisition

| IMPLEMENTATION OF LANDSCAPE OBJECTIVES | TOTAL ACRES PER OBJECTIVE * | ACRES OF WETLAND PROTECTED OR RESTORED 2002-2020 |
|---|--------------------------------|--|
| 1 – Permanently protect 100% (148 acres) of intact Category 1 saline wetlands and their associated conservation zones to ensure that the wetlands and their functions are sustained | 148 | 47 |
| 2 – Restore and Protect 80% (1,412 acres) of unprotected degraded Category 1 saline wetlands and their associated conservation zones to ensure that the wetlands and their functions are sustained | 1,412 | 483 |
| 3 – Restore (to intact Category 1 wetlands) and protect 50% (167 acres) of unprotected Category 3 saline wetlands and their associated conservation zones to ensure that the wetlands and their functions are sustained as intact Category 1 wetlands | 167 | 99 |
| 4 – Restore (to intact Category 1 wetlands) and protect 50% (2,360 acres) of unprotected current non-wetland areas on saline hydric soils so that they become intact and sustained Category 1 saline wetlands | 2,360 | 535 |
| TOTAL | 4,087 | 1,164 |

* Acres identified in 2003 Implementation Plan

Source: Ted LaGrange and Rachel Simpson of the NGPC, June 2018 and SWCP, 2021



WETLAND MANAGEMENT

Seasonal employees (four in 2019 and six in 2020) hired by the LPSNRD performed management on the saline wetland areas. Members of the SWCP establish management activities to be addressed within the saline wetlands complex. These employees primarily worked on noxious weed and woody vegetation removal, structure maintenance, and access. Funding for these positions is provided with stewardship funds through an agreement between the LPSNRD and The Nature Conservancy to support saline wetland management areas. Approximately 2,100 hours were worked by the seasonal employees in 2019 and 2020 on saline wetland management activities from May through November. The Coordinator and LPSNRD provided supervision of the employees. Since 2015, it is estimated the LPSNRD has expended at a minimum \$20,000 annually for employee salaries and supplies.

The LPSNRD has one fulltime Maintenance Technician who assists the seasonal employees with work performed on the saline wetlands. This work is also compensated through the stewardship fund. The Coordinator also holds an annual meeting of the land managers of the saline wetland management areas to share and discuss issues and methods of land management on these areas.

FUNDING RESOURCES

The following provides a summary of recent funding awards. It does not include all the grant awards received since the inception of the SWCP in 2002.

- Federal Section 6 Land Recovery Acquisition grants – In 2013, the NGPC through the U.S. Fish and Wildlife Service was awarded \$190,300 for saline wetland land acquisition. Funding was used for the 2019 Jack Sinn WMA (Olson) acquisitions.

In 2016, the NGPC through the U.S. Fish and Wildlife Service was awarded \$206,536 for the acquisition of a property containing saline wetlands. This funding was used for the 2019 Jack Sinn WMA (Olson) acquisitions.

In 2020, the NGPC through the U.S. Fish and Wildlife Service was awarded \$357,806 for acquisition of a property containing saline wetlands. The acquisition funding is pending.

- A grant was submitted to the Nebraska Environmental Trust in 2015 for the “Eastern Saline Wetlands Project – 2016.” The grant was approved in the amount of \$795,000 over three years primarily for wetland restoration/engineering/management and planning activities. A one-year extension of the grant was approved through June 2020. A Final Report for the grant was submitted in June 2021.
- In 2012, The Nature Conservancy and the Lower Platte South Natural Resources District amended a previous grant agreement to specifically build, enhance and/or maintain effective ecological stewardship of the saline wetlands. Beginning June 30, 2012 and through July 1, 2019, The Nature Conservancy disbursed \$7,500 annually and the Lower Platte South Natural Resources District matched funding for the project for the Project.
- In 2020, a PL 566 grant agreement was completed between the LPSNRD and the Natural Resources Conservation Service in the amount of approximately \$400,000. The grant is for saline wetland habitat enhancement and protection, wetland rehabilitation and erosion and sediment control projects in the Little Salt Creek watershed.

SUMMARY OF OTHER COORDINATOR ACTIVITIES

- Attended meetings regarding City and County projects regarding construction activities scheduled near or on saline wetland areas
- Attended and participated in City of Lincoln Parks and Recreation Department meetings regarding greenways, Wilderness Park, Mayors Environmental Task Force, Spring Creek Prairie Fall Festival, and the Prairie Corridor project
- Presented on saline wetlands and the SWCP to Nebraska Game and Parks Commission Habitat Partners Section, the LPSNRD Recreation, Forestry, and Wildlife sub-committee, Sandhills Task Force, Lancaster County Commissioners, UNL classes, Pheasants Forever 2019 conference, The Wildlife Society 2019 conference, and the 2020 Nebraska Natural Legacy Conference.
- Facilitated and presented information for the development of a new inter-local agreement between the City of Lincoln, Lower Platte South Natural Resources District, Nebraska Game and Parks Commission, and Pheasants Forever, Inc. entered into agreements to continue the Saline Wetlands Conservation Partnership. The agreements are for five years and will need renewed by June 30, 2024.
- Tour sites and presented information on the Partnership and saline wetlands to Prairie Corridor tour, Nebraska Plant Society, Platte Basin time-lapse personnel, local groups, and assisted with student projects



- Land management – Participate in interviews of potential seasonal employees, supervision of seasonal employees, annual saline wetland discussion with agency land managers, and noxious weed and woody vegetation control and GPS location identification at saline wetland sites
- Youth education – presented and participated in the Earth Wellness Festival and UNL Career Day in 2019

- Participated with the LPSNRD, City of Lincoln Watershed, and the NGPC on Consultant interviews for the PL 566 planning project
- Assisted with Upper Little Salt Creek Saline Wetlands Project. Toured sites and had several meetings regarding the final engineering project
- Completed and submitted 2020 NET grant proposal; not awarded
- Attended NGPC Habitat Partners Section meeting, The Midwest Wildlife Society annual conference, Rainwater Basin Joint Venture Seminar, Upper Mississippi/Great Lakes Joint Venture annual meeting, NGPC Salt Creek tiger beetle public meeting, UNL Cabela's grant recipient's poster session, and Nebraska Natural Legacy conference
- Worked with USFWS and NGPC on endangered species monitoring efforts, re-introduction site locations, accessibility issues for Master Naturalist teams to gather monitoring information, and participated in release of endangered species
- Worked with City legal counsel in development of Waiver, Release, and Access Agreements for private haying of City owned land; executed agreements with cooperator and monitor work per agreement
- Executed contract with The Flatwater Group, Inc. to conduct engineering services for endangered species habitat enhancements at Frank Shoemaker Marsh and Final and Construction engineering services for the Haines Branch
- Assisted the LPSNRD and UNL student on master's degree project using cameras to capture saline wetland images throughout the year for future educational project using a mobile application method
- Assisted Dr. Zhenghong Tang of UNL on a U. S. EPA grant application to study saline wetlands near urbanized areas. Grant was approved in 2020 and assisted Dr. Tang with agreements to proceed with work beginning in 2021 on public areas.

The project includes placement of small sensors over a three period at saline wetland sites. Dr. Tang and post-doctorate student will gather soil, water, and vegetation data from saline wetland areas within the Little Salt Creek watershed for comparison of locations within different proximity to the urban area.

- Participant on the Prairie Corridor technical advisory committee, core team representative of Nebraska Wetland Assessment grant project, U.S. Corps of Engineers Nebraska inter-agency wetland group, Wilderness Park Strategic Plan Committee, and Technical Advisory Group of the LPSNRD Water Quality Management Plan
- Worked with landowners and representatives, fund administrators and agencies regarding the acquisition of land from willing sellers.
- Miscellaneous grant administration and participation in grant applications through conservation agencies regarding wetland projects

SALINE WETLAND PROPERTIES

- **Frank Shoemaker Marsh** – 27th Street and Bluff Road
Size: 160 acres
Purchase price and date: \$472,000 on June 12, 2003
Funding sources: 2001 State Wildlife Grant through the
USFWS (\$222,000)
2002 NET grant (\$250,000)
Owner: City of Lincoln

Activity summary – Noxious weed removal and cedar removal was concentrated around wetland cells and west of Little Salt Creek. Minimal repairs of overlooks and monitoring of tree plantings along 27th Street. Haying agreement for 2019.

Completed engineering services for endangered species habitat enhancement.

- **Dakota Springs** – South of Arbor Road and East of 27th Street
Size: 68.7 acres
Purchase price and date: \$204,700 in January 2004
Funding sources: Federal Section 6 (\$153,525)
2002 NET grant (\$51,175)
Owner: City of Lincoln

Dakota Springs Extension Purchase (Dial Realty, 7.45 acres)

Purchase price and date: \$48,500 on December 31, 2008
Funding source: Federal Section 6

Activity summary – Noxious weed and woody vegetation removal continued. Access gate installed by LPSNRD. Haying agreement for 2019.

- **Warner Saline Wetlands** - 98th Street and Interstate 80
Size: 140 acres
Purchase price and date: \$298,580 on December 7, 2004
Funding sources: Federal Section 319 (\$179,148)
LPSNRD (\$43,043.20)
SWCP (\$76,388.80)
Owner: Lower Platte South Natural Resources District

Activity summary – Noxious weed and woody vegetation removal continues. Prescribed grazing in 2019.

- **Little Salt Creek Wildlife Management Area** – 1st Street and Raymond Road
Total Size: 256.5 acres
Purchase price and date: \$476,000 in June 2004 (original 156 acres)
Funding sources: Federal Section 6 (\$276,000)
2004 NET grant through NGPC (\$200,000)
Owner: Nebraska Game and Parks Commission

- **Noble Tract Extension (100.5 acres)** - Along Little Salt Creek, between Mill Road and the southern boundary of the original Little Salt Creek Wildlife Management Area.

Activity summary – Prescribed grazing and haying of upland was conducted. Cedar removal and noxious weed control continues. Platte Basin time lapse camera location.

- **Little Salt Creek West Wildlife Management Area** – South of Branched Oak Road between NW 12th and 1st Streets

Size: 220.0 acres
 Purchase price and date: \$979,000 on October 9, 2009
 Funding sources: Federal Section 6 (\$560,000)
 2005 NET Grant (\$42,838.58)
 2008 NET Grant (\$366,250.42)
 Ducks Unlimited (\$10,000)
 Owner: Nebraska Game and Parks Commission

Activity summary – Prescribed grazing was conducted. Cedar removal and noxious weed control. Boundary fence installation.

- **Marsh Wren** – Between 40th and 56th Streets and north of Salt Creek

Size: 80.0 acres
 Purchase price and date: \$320,000 on May 27, 2009
 Funding sources: Lower Platte South NRD (\$25,000)
 SWCP (\$25,000)
 City of Lincoln floodplain acquisition funds (\$178,000
 (\$89,250 each from the City of Lincoln and the LPSNRD)
 2005 NET Grant (\$91,500)
 Owner: Lower Platte South Natural Resources District

Marsh Wren addition (Anderson property) – East of 40th Street and immediately north of Salt Creek

Size: 49.4 acres
 Purchase price and date: \$270,000 on June 19, 2012
 Funding sources: Federal Section 6 (\$135,000)
 2008 NET Grant (\$130,000)
 SWCP (\$5,000)
 Owner: Lower Platte South Natural Resources District

Activity summary – Noxious weed and woody vegetation removal continued. Construction completed on wetland restoration project. The saline water distribution system is monitored for water release and any necessary modifications. Initiated discussion for embankment repairs due to animal burrows.

- **Arbor Lake Complex** – North of Arbor Road and east of 27th Street.
Size: 132.5 acres
Owner: City of Lincoln

Arbor Lake Extension Purchase (Anderson Property, 69.2 acres)

Purchase price and date: \$361,710.67 on September 1, 2004
Funding source: 2002 NET grant through City of Lincoln

Activity summary – Post-restoration monitoring is continual. Noxious weed and woody vegetation removal. Haying agreement for 2019.

- **Little Salt Fork Marsh Preserve addition (Allen property)** – Between Branched Oak Road and Raymond Road and west of 1st Street
Size: 66.6 acres
Purchase price and date: \$304,000 on February 17, 2010
Funding sources: Lower Platte South NRD (\$76,000)
SWCP (\$75,000)
2008 NET Grant (\$153,000)
Owner: Lower Platte South Natural Resources District

Activity summary – Noxious weed and woody vegetation removal continued. Monitor 2017 native seeding.

- **Little Salt Springs** – NW 12th Street and Branched Oak Road
Size: 123 acres
Purchase price and date: \$472,188 on July 31, 2007
Funding sources: Lower Platte South NRD (\$187,960.35)
2005 NET grant (\$227,227.95)
Partnership Funds (\$57,000)
Owner: Lower Platte South Natural Resources District

Little Salt Springs Addition (Downs Property) – West Branched Oak Road between NW 12th and NW 27th streets

Size: 13.3 acres
Purchase price and date: \$175,000 on October 15, 2015
Funding sources: Lower Platte South NRD (\$43,201.17)
2012 NET Grant (\$131,798.83)
Owner: Lower Platte South Natural Resources District

Activity summary – Solar pump re-purposed from Arbor Lake was installed at existing well. Continue to control noxious weeds and woody vegetation removal. Parking lot constructed at old residence drive along West Branched Oak Road.

- **Helmuth Marsh** – South of Mill Road and west of 14th Street
 Size: 119.0 acres
 Purchase price and date: \$630,000 on November 23, 2010
 Funding sources: Federal Section 6 (\$275,000)
 2001 State Wildlife Grant through the
 U.S. Fish and Wildlife Service (\$131,666.50)
 NGPC (\$23,333.50)
 Donation from Helmuth family (\$200,000)
 Owner: Pheasants Forever, Inc.

Activity summary – Prescribed grazing and haying of upland was conducted. Shrub plantings for wildlife completed.

- **Jack Sinn Wildlife Management Area (Kreitman addition)** – Between North 70th and North 84th streets and south of Ashland Road
 Size: 183.5 acres
 Purchase price and date: \$375,000 on June 4, 2014
 Funding sources: Nebraska Game and Parks Commission (\$225,000)
 2012 NET Grant (\$150,000)
 Owner: Nebraska Game and Parks Commission

Activity summary – Noxious weed and woody vegetation removal. Fencing plan developed to allow for prescribed grazing

- **Jack Sinn Wildlife Management Area Addition (Laurel Nelson property) – On West Branched Oak Road between NW 12th and NW 27th streets**
 Size: 79.8 acres
 Purchase price and date: \$378,000 on December 29, 2017
 Funding sources: Pittman-Robertson funds through the NGPC
 Owner: Nebraska Game and Parks Commission

Activity summary – Noxious weed and woody vegetation removal. Boundary fencing constructed. Parking lot being planned for access

- **Glacial Hill (Norder Tract)** – Between North 14th and North 27th streets and south of Waverly Road
 Size: 78.9 acres
 Purchase price and date: \$457,000 on September 15, 2014
 Funding sources: Federal Section 6 (\$270,000)
 2012 NET Grant (\$187,000)
 Owner: City of Lincoln

Activity summary – Preliminary planning and engineering project completed for site. Noxious weed and woody vegetation removal. Prescribed grazing.

- **Glacial Hill Addition (Christensen Parcel)** – Between North 14th and North 27th streets and south of Waverly Road. West of Norder Tract.
Size: 60.8 acres
Purchase price and date: \$350,700 on December 20, 2018
Funding sources: 2016 NET Grant (\$275,000)
City of Lincoln (\$75,000)
Saline Wetlands Conservation Partnership (\$700)
Owner: City of Lincoln

Activity summary – Management Plan completed. Boundary fence installed/repaired and field road access off of Waverly Road completed. Prescribed grazing.

The following saline wetland properties were acquired prior to the inception of the SWCP in 2002. The properties are supported through the activities identified in “Nebraska’s Eastern Saline Wetlands Conservation Plan (2018).”

- **Seacrest Range** (43 acres) – Located west of Folsom Street along both the north and south sides of Rosa Parks Way. The area is owned by the City of Lincoln. Efforts continued to remove woody vegetation and to control noxious weeds (Leafy spurge). Flood control levee on east boundary and south of Rosa Parks Way completed.
- **Lincoln Saline Wetlands Nature Center** (92.7 acres) – Located near Capitol Beach in Lincoln. The area is owned by the LPSNRD. Management activities included noxious weed control (considerable phragmites) and woody vegetation. Monitoring soil borrow project site and shallow excavations for saline wetland recovery.
- **Schleich Wetlands** (50.2 acres) – It is located southwest of Little Salt Creek near where it empties into Salt Creek and east of the Northridge subdivision in Lincoln. The area is owned by the LPSNRD. Management activities included noxious weeds and removal of invasive trees.
- **Whitehead Wetlands** (98.8 acres) – It is located east of 27th street and a short distance south of Interstate 80. The area is owned by the LPSNRD. Management activities were noxious weed control and removal of woody vegetation.
- **Little Salt Fork Marsh Preserve** (174.2 acres) – Located northwest of north 1st Street and Raymond Road and owned by the LPSNRD. Management activities included control of noxious weeds and cedar tree removal. Raymond Road Bridge completed in 2019. New fencing in vicinity being planned
- **Portions of the Jack Sinn Wildlife Management Area** (1,620.0 acres) – Located south of Ceresco in Saunders and Lancaster counties. The area is owned by the NGPC. Management activities in 2018 were noxious weed control, woody vegetation removal, and prescribed fire and grazing.

This program has been very successful and continues to accomplish many of the goals of Nebraska's Eastern Saline Wetlands Conservation Plan 2018. Your continued support for the conservation of these natural areas is appreciated. If you have any questions, please contact me at 402-441-7063 or tmalmstrom@lincoln.ne.gov at the City Parks and Recreation Department or 402-476-2729 or tmalmstrom@lpsnrd.org at the LPSNRD.

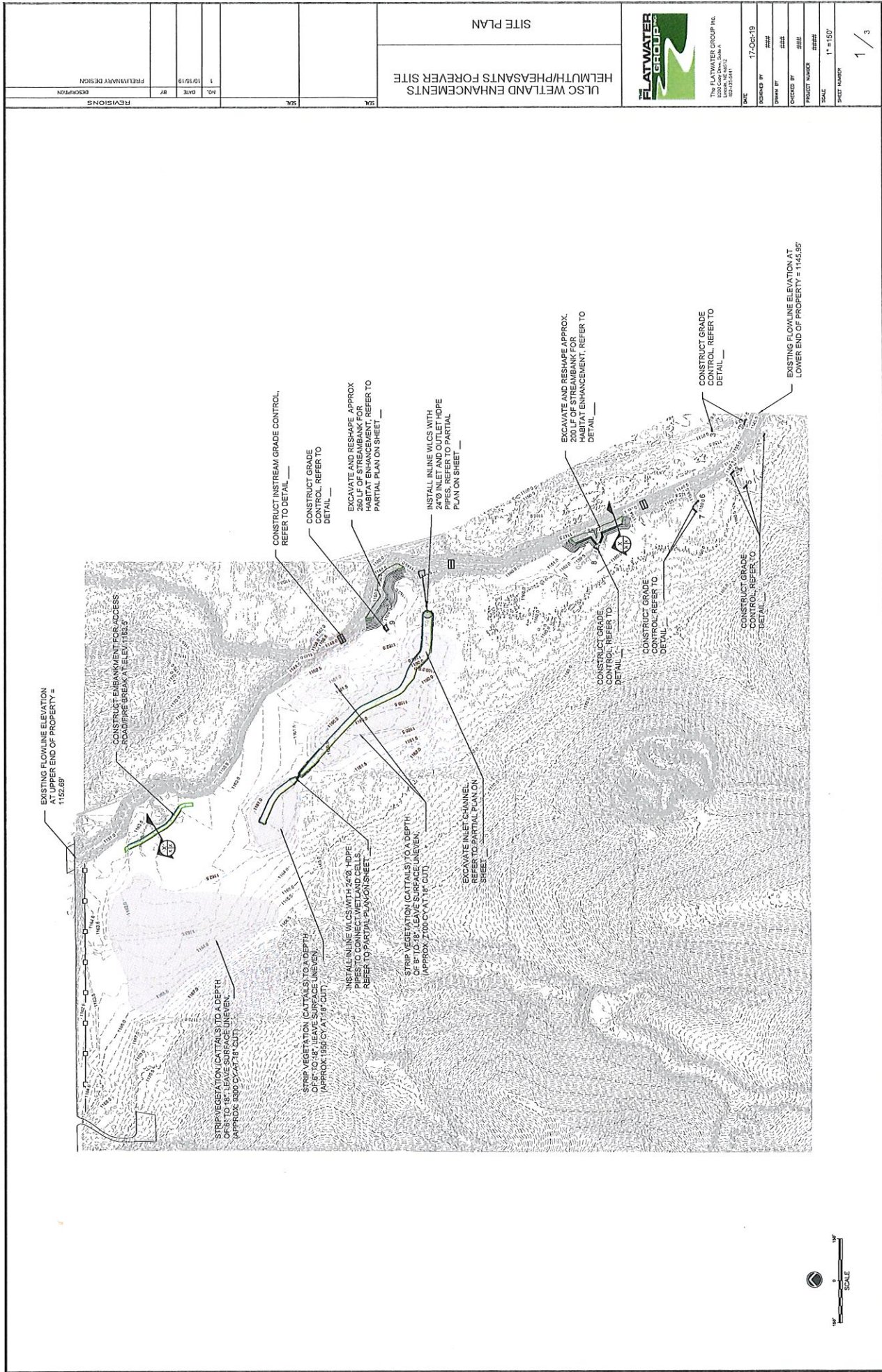
You can visit the saline wetland website at [Saline Wetlands – City of Lincoln, NE](#)



Appendix


UPPER LITTLE SALT CREEK SALINE WETLANDS PROJECT

Wetland Enhancement Site Plans



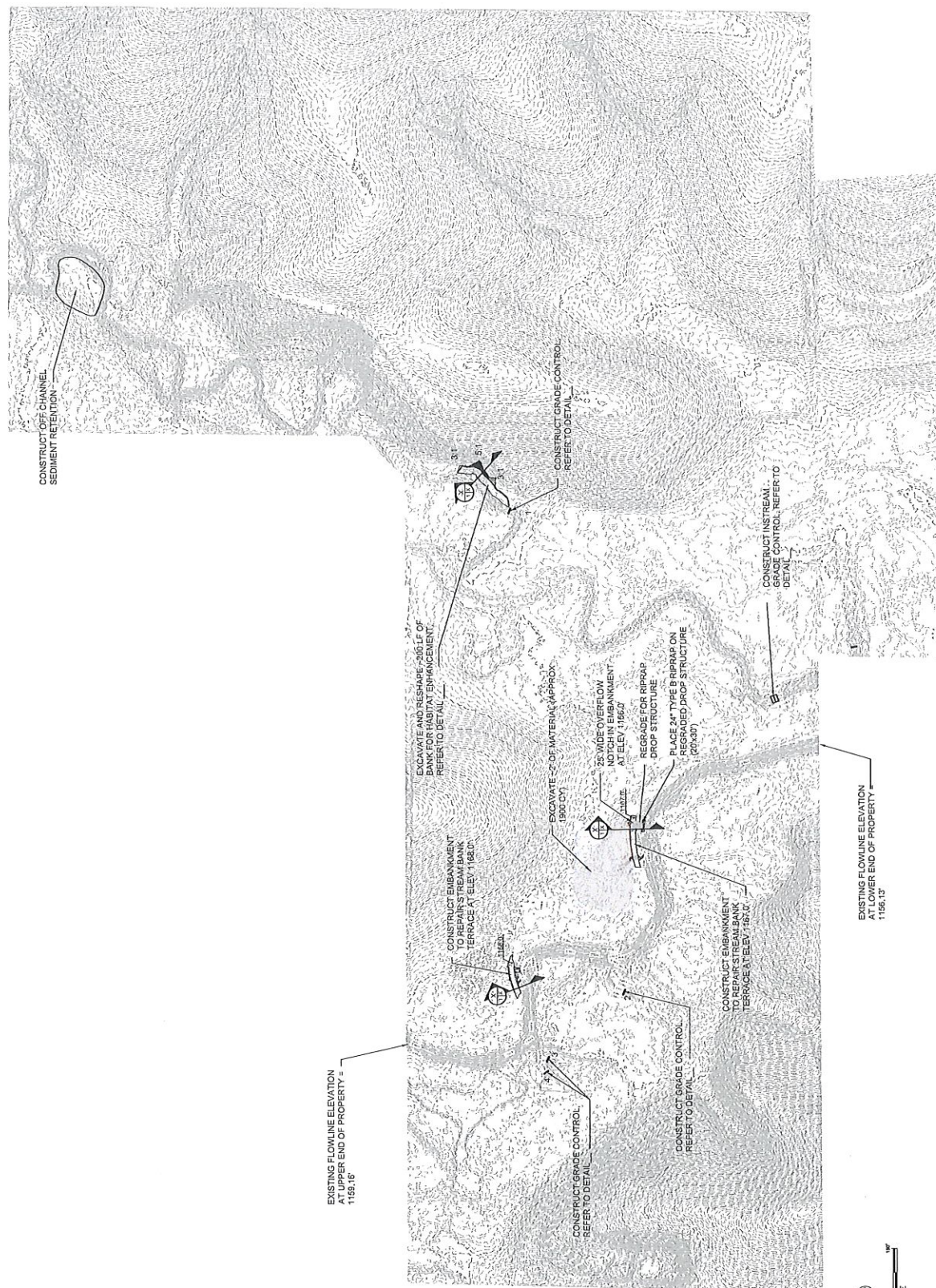
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| SHEET PLAN | | JLSC WETLAND ENHANCEMENTS | | HELMUTH/PHEASANTS FOREVER SITE | |
|------------|--|---------------------------|--|--------------------------------|--|



THE FLATWATER GROUP INC.
10000 W. 10TH AVE. SUITE 100
DENVER, CO 80202
303-555-5541

| | |
|----------------|-----------|
| DATE | 17-Oct-19 |
| DRAWN BY | ### |
| CHECKED BY | ### |
| PROJECT NUMBER | ### |
| SCALE | 1" = 150' |
| SHEET NUMBER | 1 / 3 |



EXISTING FLOWLINE ELEVATION
AT LOWER END OF PROPERTY =
1156.13'

EXISTING FLOWLINE ELEVATION
AT UPPER END OF PROPERTY =
1159.16'

CONSTRUCT OFF-CHANNEL
SEDIMENT RETENTION

CONSTRUCT GRADE CONTROL

CONSTRUCT INSTREAM.
GRADE CONTROL. REFER TO
DETAIL

EXCAVATE AND RESHAPE ~200 LF OF
BANK FOR HABITAT ENHANCEMENT.
REFER TO DETAIL _____

2 OF MATERIAL APPROX

25' WIDE OVERFLOW
NOTCH IN EMBANKMENT

PLACE 24" TYPE B RIPRAP ON
REGRADED DROP STRUCTURE

CONSTRUCT EMBANKMENT
TO REPAIR STREAM BANK
TERFACE AT ELEV. 1162.03

CONSTRUCT GRADE CONTROL;
REFER TO DETAIL

CONSTRUCT GRADE CONTROL.
REFER TO DETAIL

CONSTRUCT EMBANKMENT
TO REPAIR STREAM BANK
TERRACE AT ELEV 1167.0

ULSC WETLAND ENHANCEMENTS
LITTLE SALT CREEK WMA

SITE PLAN



THE FLATWATER GROUP INC.
2200 Coody Drive, Suite A
Lincoln, NE 68512
402-435-5441

| | |
|----------------|-----------|
| DATE | 1-Feb-19 |
| DESIGNED BY | ### |
| DRAWN BY | ### |
| CHECKED BY | ### |
| PROJECT NUMBER | ##### |
| SCALE | 1" = 150' |
| NOT TO SCALE | |

| REVISIONS | | | |
|-----------|----------|----|--------------------|
| NO. | DATE | BY | DESCRIPTION |
| 1 | 10/18/19 | | PRELIMINARY DESIGN |

Y

3



ULSC WETLAND ENHANCEMENTS
LITTLE SALT FORK MARSH PRESERVE

SITE PLAN

1 / 4

17-Oct-19

DESIGNED BY: [blank]

DRAWN BY: [blank]

CHECKED BY: [blank]

PROJECT NUMBER: [blank]

SCALE: 1" = 200'

SHEET NUMBER: [blank]

NO. 1

DATE: 10/16/19

BY: [blank]

REVISIONS

DESCRIPTION

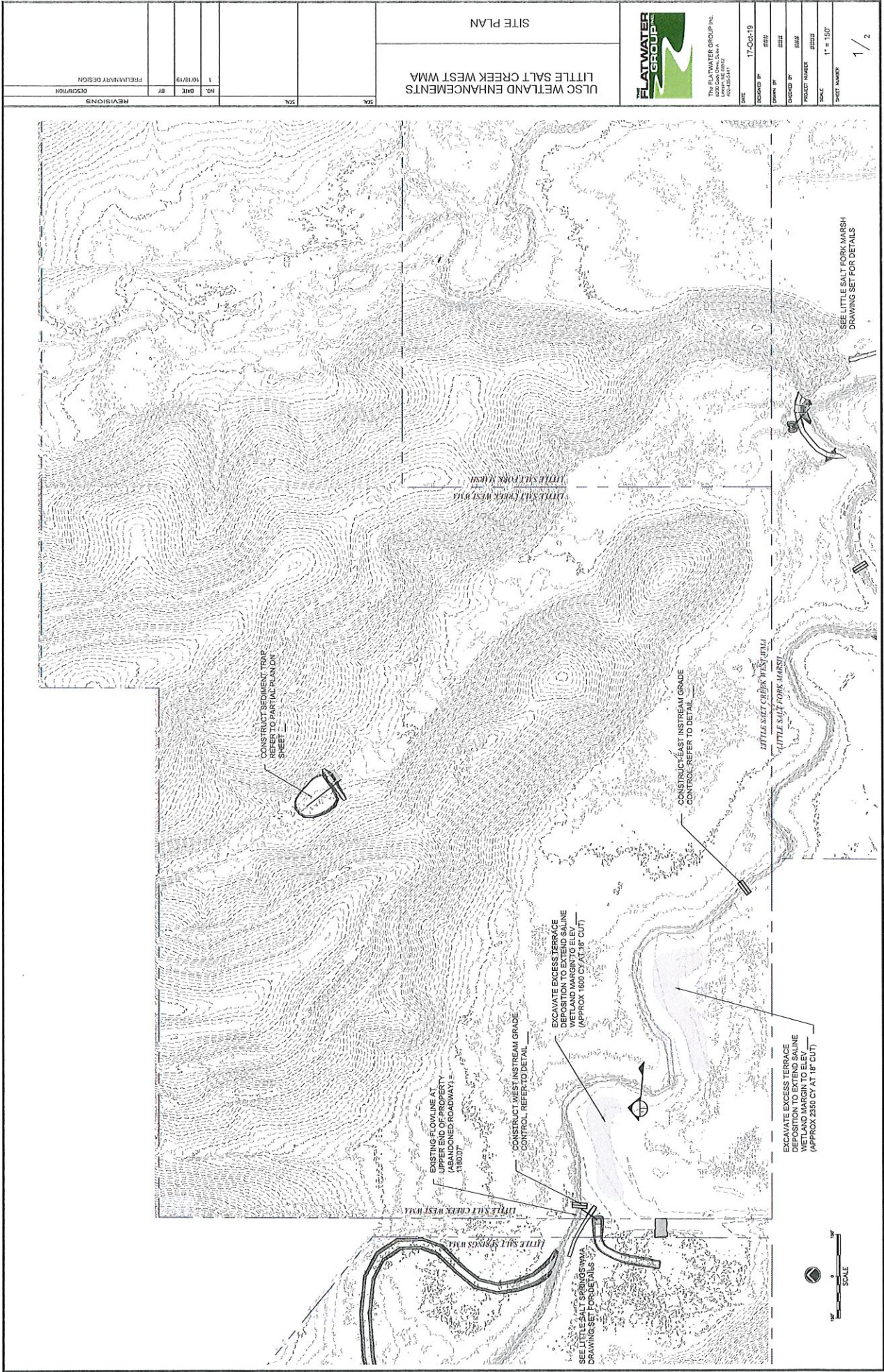
FLATWATER GROUP, INC.

2000 East 10th Street

Wichita, KS 67202

PH: 316.262.1234

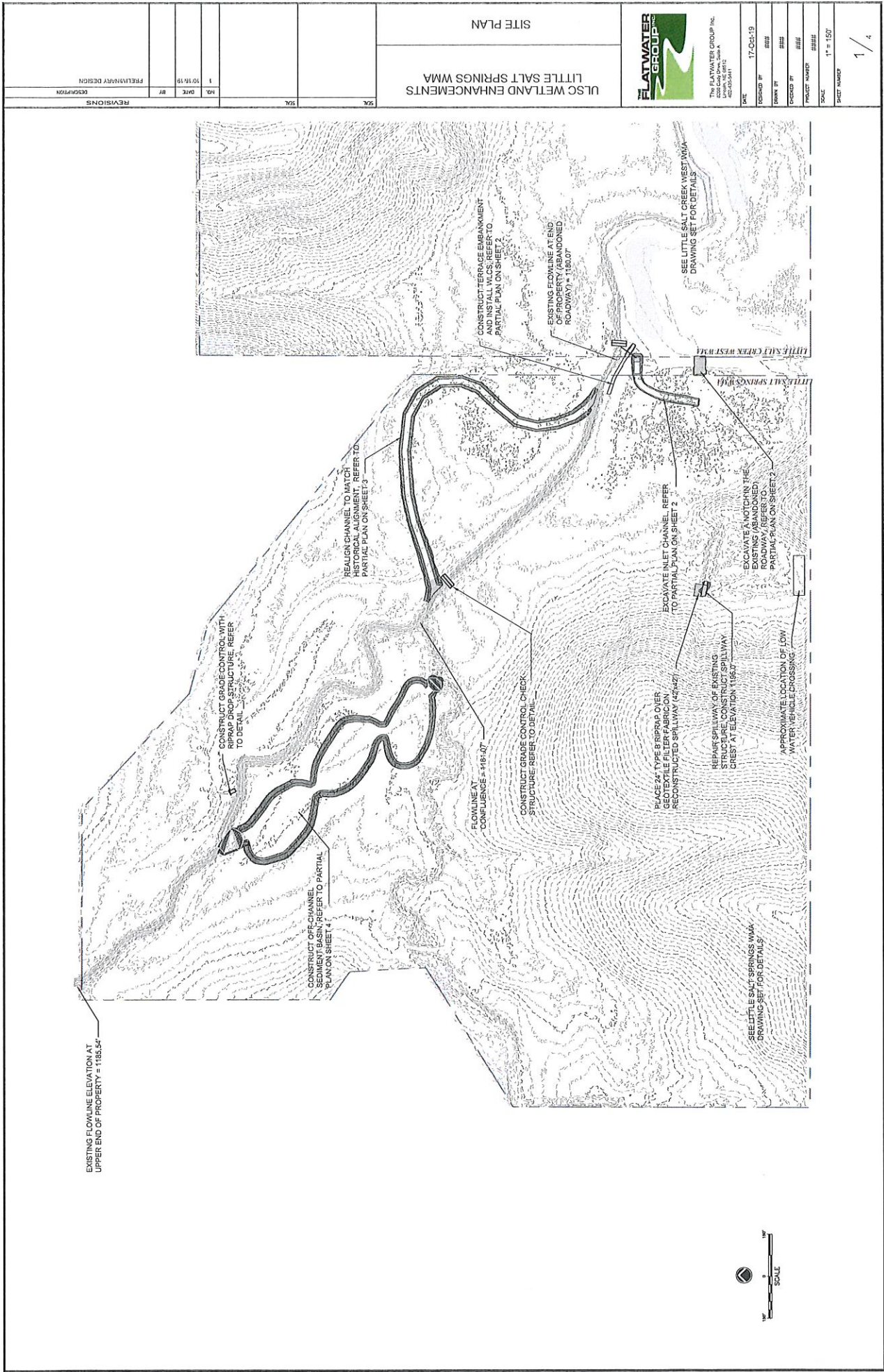
WWW.FLATWATERGROUP.COM



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| PROJECT NUMBER | ### | DRAWN BY | ### |
| SCALE | 1" = 150' | SHEET NUMBER | 1 / 2 |
| REVISIONS | | | |
| DESCRIPTION | | | |
| NO. | 1 | DATE | 10/18/19 |
| BY | | BY | |
| PRELIMINARY DESIGN | | | |



THE FLATWATER GROUP, INC.
2020 Oak Drive, Suite A
Littleton, CO 80120
303.733.1111



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| ULSC WETLAND ENHANCEMENTS LITTLE SALT SPRINGS WMA | | SITE PLAN | |
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